



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,246	11/14/2001	Yoshihiro Miyamoto	Q67253	6833
7590 03/18/2009 SUGHRUE, MION, ZINN, MACPEAK & SEAS 2100 Pennsylvania Avenue, N.W. Washington, DC 20037				
EXAMINER SHIBRU, HELEN				
ART UNIT		PAPER NUMBER		
2621				
MAIL DATE		DELIVERY MODE		
03/18/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/987,246

Applicant(s)

MIYAMOTO, YOSHIHIRO

Examiner

HELEN SHIBRU

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/05/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amended claims recite "at least one frame which is closest to a frame which is at a timing when a special reproduction is required among the frames which are intra-frame re-encoded, and wherein the number of wholly intra-frame re-encoded frames included in the data

selected from said re-encoded moving picture data.” There is no support in the disclosure for this limitation. Paragraph 56 discloses the selector reads only I picture in the re-encoded data closest to a picture frame at a decoding start point from first memory and reads encoded data from second memory for the remaining frame. However no where in the spec is found the limitation ‘at least one frame which is closest to a frame which is at a timing when a special reproduction is required among the frames which are intra-frame re-encoded, and wherein the number of wholly intra-frame re-encoded frames included in the data selected from said re-encoded moving picture data.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto (US Pat. No. 5,887,110) and further in view of Allen (US Pat. No. 4,584,616).

Regarding claim 1, Sakamoto discloses an encoded moving picture data conversion device for converting encoded moving picture data compression-encoded by using inter-frame prediction, and for outputting converted data as encoded output data capable of being subjected to special reproducing (see abstract, col. 6 lines 62-67 and claim 1), the device comprising:

first storage means for storing said inputted encoded moving picture data (see col. 7 lines 35-52 and claim 21 (1 and 3) and claim 24));

decoding means for decoding said inputted encoded moving picture 10 data to decoded data (see col. 7 lines 1-8 and claim 1 (b));

re-encoding means for re-encoding said decoded data of a picture frame in a moving picture sequence, in an intra-frame encoding mode in order to generate intra-frame re-encoded data (see col. 7 lines 8-20 and claim 14);

second storage means for storing re-encoded data, said re-encoded data including said intra-frame re-encoded data (see col. 7 lines 35-52 and claim 21 (2 and 30 and claim 24); and

selection means for making a selection of data for each picture frame, frame-by-frame, the data being selected from said encoded moving picture data stored in said first storage means and said re-encoded data stored in said second storage means, and for outputting the selected data as said encoded output data capable of being subjected to said special reproducing (see col. 8 lines 30-42 and claim 7. See also fig. 5 which shows that each frames are encoded for the Normal playback mode and each frames are re-encoded using only the intra-frame coding scheme in order to generate intra-frame re-encoded data for the fast playback mode. During reproduction, coded video data are switched between the first storage means and the second storage means. The first storage means stores each entered video frames and the second storage means stores each intra-frame. See also figures 5-6, col. 7 lines 21-col. 9 line13 and the previous Office Actions).

Claim 1 differs from Sakamoto in that the claim further requires at least one frame which is closest to a frame which is at a timing when a special reproduction is required among the

frames which are intra-frame re-encoded, and wherein the number of wholly intra-frame re-encoded frames included in the data selected from said re-encoded moving picture data.

In the same field of endeavor Allen discloses at least one frame which is closest to a frame which is at a timing when a special reproduction is required among the frames which are intra-frame re-encoded, and wherein the number of wholly intra-frame re-encoded frames included in the data selected from said re-encoded moving picture data (see col. 18 line 52-col. 19 line 49). Therefore in light of the teaching in Allen it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sakamoto by selecting I frame in order to perform trick play function more rapidly.

Regarding claim 2, Sakamoto discloses re-encoding means comprises:

means for re-encoding said decoded data of picture frames as many as J following after the picture frame re-encoded in the intra-frame encoding mode, by using inter-frame prediction in order to generate inter-frame re-encoded data, where J is an integer greater than zero (see col. 7 lines 21-34, fig. 7 and 8, and claim 1);

means for measuring a picture quality of re-encoded picture frames, said re-encoded picture frames including the intra-frame re-encoded picture frame and one or more inter-frame re-encoded picture frames (see col. 8 lines 10-26 and col. 11 line 56-col. 12 line 3); and

means for controlling a value of said J in accordance with said picture quality (see col. 8 lines 43-56), and

wherein said selection means comprises means for, if selecting said intra-frame re-encoded data, also selecting said inter-frame re-encoded data of the picture frames as many as J

following after said intra-frame re-encoded data (see col. 8 lines 1-9 and 31-42, and col. 10 lines 49-57).

Regarding claim 3, Sakamoto discloses re-encoding means comprises.

means for skipping picture frames as many as $(K-1)$ after the intra-frame re-encoded picture frame, where K is an integer greater than one (see col. 7 lines 21-34, and col. 11 line 56- col. 12 line 3);

means for re-encoding said decoded data of a picture frame after K frames from said intra-frame re-encoded picture frame, by using inter-frame prediction with reference to said intra-frame re-encoded picture frame in order to generate inter-frame re-encoded data (see col. 8 lines 43-63);

means for calculating the number of frames constituted of said input encoded moving picture data corresponding to said intra-frame re-encoded data in code amount (see col. 8 lines 1-26); and

means for controlling a value of said K in accordance with the number of frames calculated (see col. 8 lines 27-42), and

wherein said selection means comprises means for, if selecting said intra-frame re-encoded data, skipping the frames as many as $(K-1)$ following after said intra-frame re-encoded picture frame, and for selecting said inter-frame re-encoded data after the K frames from said intra-frame re-encoded picture frame (see col. 10 lines 8-28).

Regarding claim 4, Sakamoto discloses re-encoding means comprises means for re-encoding said decoded data of frames at L -frame intervals in an intra-frame encoding

mode generate intra-frame re-encoded data, in such a way that re-encoded data in each frame occupy at least a part of the frame and re-encoded data gathered from frames as many as M cover an entire frame area, where L is an integer greater than one and M is an integer greater than one (see col. 12 lines 4-34), and

wherein said selection means comprises means for selecting only said intra-frame re-encoded data in response to a high-speed reproducing request, and for outputting said selected re-encoded data as said encoded data capable of being subjected to said special reproducing (see col. 12 line 59-col. 13 line 9).

Method claims 5-8 are rejected for the same reason as discussed in claims 1-4 above.

Regarding claim 9, Sakamoto discloses an encoded moving picture data conversion apparatus for converting encoded moving picture data compression encoded by using inter-frame prediction to converted data, the apparatus comprising (see rejection of claim 1):

decoding means for decoding said inputted encoded moving picture data to obtain decoded data (see rejection of claim 1);

re-encoding means for re-encoding said decoded data at an intra-frame encoding mode in order to generate intra-frame re-encoded data (see rejection of claim 1);

replacing means for replacing a portion of said inputted encoded moving picture data by said re-encoded data, for outputting the replaced data as said converted data (see claims 1 (c) and claim 4, the inputted data is re-encoded, i.e. the input encoded data is replaced by re-encoded data).

Claim 9 differs from Sakamoto in that the claim further requires at least one frame which is closest to a frame which is at a timing when a special reproduction is required among the

frames which are intra-frame re-encoded, and wherein the number of wholly intra-frame re-encoded frames included in the data selected from said re-encoded moving picture data.

In the same field of endeavor Allen discloses at least one frame which is closest to a frame which is at a timing when a special reproduction is required among the frames which are intra-frame re-encoded, and wherein the number of wholly intra-frame re-encoded frames included in the data selected from said re-encoded moving picture data (see col. 18 line 52-col. 19 line 49). Therefore in light of the teaching in Allen it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sakamoto by selecting I frame in order to perform trick play function more rapidly.

Regarding claim 10, the limitation of claim 10 can be found in claim 9. Therefore claim 10 is analyzed and rejected for the same reason as discussed in claim 9 above.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN SHIBRU whose telephone number is (571)272-7329. The examiner can normally be reached on M-F, 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HELEN SHIBRU/
Examiner, Art Unit 2621
March 15, 2009

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621